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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

NAKHJAVAN, SHERVIN K

ART UNIT

PAPER NUMBER

2621

DATE MAILED: 03/25/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/680,669

Applicant(s)

KUMAR ET AL.

Examiner

Shervin Nakhjavan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 24 and 27 is/are allowed.
- 6) ☒ Claim(s) 1-23 and 25 is/are rejected.
- 7) ☒ Claim(s) 26 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>8</u> . | 6) <input type="checkbox"/> Other: ____ |

Response to Arguments

1. Applicant's arguments, in the amendment filed 1-5-04, with respect to the rejection(s) of claim(s) 1-23 and 25 under 102(b) and 102(e) have been fully considered and are persuasive. In reply to applicant's inquiry with regards to status of claim 26, it is further iterated that claim 25 was rejected in the previous office action and claim 26 was objected to as having allowable subject matter as stated in office action summary and in the office action with exception of claim 26 being mistyped. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of applicant's admitted prior art Bergen et al. (WO 98/21688).

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 12, 19, 20 and 21 are rejected under 35 U.S.C. 102(b) as being anticipated by Bergen et al. (WO 98/21688).

Regarding claims 1, 12, 19, 20 and 21, Bergen teaches, limitation of claim 1, apparatus for processing video comprising: a segmenter for segmenting video sequences into a plurality of video segments (Page 13, Lines 17-20, where a segmenter 122 divides the video sequence into segments or scenes); a video processor for processing the video segments of the video sequences and identifying common

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attributes between video segments (Page 16, Lines 6-12, where the analysis engine 124 of figure 1 performs step 330-340 in order to calculate or identify the common attribute or sharing attribute between scenes or segments of the video); and a database for storing processed segments of the video sequences (Page 16, Lines 17-21, where scenes or segments are stored in vault 150), where a plurality of processed video segments are linked via the identified common characteristics (Page 16, Lines 12-14, where all the segments or scenes sharing the same textural features are linked and retrieved upon textural query);

Limitation of claim 12, a method of image processing comprising: segmenting a video sequence into a plurality of video clips (Page 13, Lines 17-20, where a segmenter 122 divides the video sequence into scenes which a scene comprise a video clip of frames); storing said video clips in a database with an associated unique identifier (Page 16, Lines 17-21, where the scene or clip attribute data such as address indicia associating the frame and scene attribute information with the actual video frames and scenes are the unique identifiers for each clip) and identifying common attributes between video clips (Page 16, Lines 6-10); storing said video clips in said database such that video clips are linked via the identified common attributes (Page 16, Lines 10-14, where scenes are stored in database or vault 150 (lines 20-21) and are linked to each other through i.e. textural attribute); and indexing said stored video (Page 5, Lines 10-18);

Limitation of claims 19, method further comprising: adding ancillary data to said video clips (Page 6, Lines 3-6);

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Limitation of claim 20, the ancillary is an annotation (Page 6, lines 6-8);

Limitation of claim 21, the ancillary data is an index to other video clips having similar attributes (Page 6, Lines 8-10).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 2-4 and 16-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bergen et al. in view of Brodersen et al. (US 6,453,459).

Regarding claims 2-4 and 16-18 Bergen teaches number of limitation of claims including authoring of interactive deices or pages including links made by common attributes of the video segments or clips of claims 4 and 18 (Page 21, Lines 27-34, where by pointing at the object such as the baseball player all the related stored scenes to the player will be retrieved) however, Bergen fails to specifically teach DVD authoring tool and utilizing the same to link segments or clips of video to each other. Brodersen teaches, limitation of claim 2, apparatus further comprising: a DVD authoring tool (Column 5, Lines 11-14);

Limitation of claim 3, said DVD authoring tool provides interactive links between video segments (Column 13, Lines 32-43, where interactive data is authored in the DVD to link the consumer to other data source);

Limitation of claim 16, the method further comprising: compressing said video clips and said video sequence using high resolution compressor (Column 1, Lines 42-51, where MPEG2 is relatively a high resolution compressing); and a DVD authoring tool for organizing said compressed video clips and video sequence onto a DVD (Column 1, Lines 49-51);

Limitation of claim 17, said links are interactive between compressed video clips and are provided by said DVD authoring tool (Column 9, Lines 25-35, where the video data of the DVD is encoded).

It would have been obvious to an ordinary skilled person in the art to utilize Bodersen's DVD authoring capability because, it would like the CD-Rom storage capability of Bergen's system, be a larger mass data storage means to provide not only storing greater amounts of multimedia and other information, but also for more interactive data retrieval by consumers (Column 1, Lines 13-15).

6. Claims 5-9 and 13-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bergen et al. in view of Kenner et al. (US 5,956,716).

Regarding claims 5-9 and 13-15 Bergen teaches number of limitations of the claims including generation of video indexing and browsing using hyper-video having interactive capabilities and links to other information (Page 21, Lines 22-34, where a

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pointing device is used to interactively link to other information sources) including links made by common attributes of the video segments of claims 7 and 15 (Page 21, Lines 27-34, where by pointing at the object such as the baseball player all the related stored scenes to the player will be retrieved) however, Bergen fails to specifically teach authoring a web page. Kenner teaches Limitation of claims 5 and 13, a web page authoring tool (Column 5, Lines 38-40);

Limitation of claims 6 and 14, said web page authoring tool provides interactive links between video segments (Column 5, Lines 40-52, where links to other video clips are made through web pages);

Limitation of claim 8, apparatus further comprising: a low resolution video compressor and a high resolution video compressor (Column 6, Lines 1-11, where MPEG1 is the low resolution compressor and MPEG2 is the high resolution compressor based on the defined of bandwidth for each scheme i.e. MPEG2 can carry 40 Mbps);

Limitation of claim 9, apparatus further comprising a temporary storage, coupled to said at least one video compressor, for storing said video sequence (Column 8, Lines 51-55).

It would have been obvious to an ordinary skilled person in the art to utilize web page capability of Kenner with Bergen's system because, it would provide for remotely stored video content to be requested and retrieved from a server selected so as to maximize network capacity and minimize transmission delays (Column 1, Lines 12-16).

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7. Claims 10, 11, 22, 23 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bergen et al. in view of Balram et al. (US 6,034,733).

Bergen teaches number of limitations of the claims including most of limitations of claim 25 as discussed with respect to claim 12 above however, Bergen fails to specifically teach enhancing of video image or clip by de-interlacing technique. Balram teaches limitations of claims 10, 11, 22, 23 and further limitation of claim 25, said video processor further comprises: a signal enhancer, coupled to a temporary storage, for enhancing the video or the clips by de-interlacing of the video signal (Column 2, Lines 42-50, where de-interlacing of the video signal is enhancing of the video signal). It would have been obvious to an ordinary skilled in the art to utilize de-interlacing of Balram with Bergen's system because, it would eliminate blurring of the input video signal.

Allowable Subject Matter

8. Claims 24 and 26 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The following is a statement of reasons for the indication of allowable subject matter: the prior art of record specifically Irani et al. (US 5,768,447) does not teach the image noise reduction method of claim 24 and the specific de-interlacing steps of claim 26, combined with other features and elements of the claims.

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9. The following is an examiner's statement of reasons for allowance: claim 27 is allowed because, the prior art of record specifically Irani et al. US 5,768,447 does not teach de-interlacing of a sequence of images as outlined in claim 27.

Contact information

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shervin Nakhjavan whose telephone number is (703) 306-5916. The examiner can normally be reached on Monday through Friday from 8:00 am to 5:30 pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo Boudreau, can be reached at (703) 305-4706.

Any response to this action should be mailed to:

Assistant Commissioner for Patents
Washington, DC 20231

Or faxed to:


(703) 872-9306 for *formal* communications, please mark "**EXPEDITED PROCEDURE**"

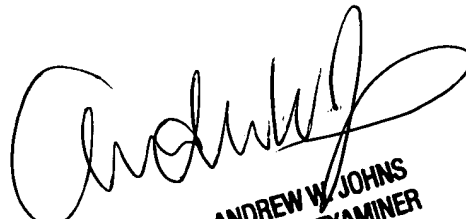
or:

for *informal* or *draft* communications; please label "**PROPOSED**" or "**DRAFT**".

Hand delivered responses should be brought to Crystal Park 2, 2121 Crystal drive, Arlington, VA, sixth floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application should be directed to the Tech center 2700 customer service office **(703) 306-0377**.

Shervin Nakhjavan 
Patent Examiner
Group Art Unit 2621
March 17, 2004.


ANDREW W. JOHNS
PRIMARY EXAMINER